

## **CLAIMS**

1. A stent, in particular a coronary stent, for a vessel of a human or animal body, comprising:

a tubular body for expansion from a first condition into a second condition in which it holds the vessel in an expanded state, wherein includes at least a first wall portion comprising a human or animal tissue of adequate elasticity.

2. The stent of claim 1, wherein the first wall portion has a stiffness which is adequate to hold the vessel in the expanded state in the second condition.

3. The stent of claim 1, wherein the first wall portion comprises cartilage tissue.

4. The stent of claim 1, wherein the first wall portion comprises a tissue which is genetically modified to increase compatibility and/or stiffness.

5. The stent of claim 1, wherein the first wall portion comprises a hardenable tissue.

6. The stent of claim 5, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a portion-wise manner contains at least a first component of a hardening agent.

7. The stent of claim 5, further comprising: a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

8. The stent of claim 5, wherein at least the first component of the hardening agent is enclosed in microcapsules which burst open under the effect of pressure.

9. The stent of claim 1, wherein the first wall portion is provided at least in a portion-wise manner with at least a third layer which includes at least a first component of an adhesive or contains at least in a portion-wise manner at least a first component of an adhesive, to produce an adhesive join to an element adjoining the first wall portion in the second condition.

10. The stent of claim 9, wherein a second wall portion is provided which is arranged in the first wall portion at least in the second condition of the stent, wherein the third layer is arranged on the surface towards the second wall portion and the second wall portion is provided on its surface towards the first wall portion, at least in a portion-wise manner, with at least a fourth layer which includes at least a second component of the adhesive.

11. The stent of claim 9, wherein at least the first component of the adhesive is enclosed in microcapsules which burst open under the effect of pressure.

12. The stent of claim 1, wherein the first wall portion is formed by a flat element (4") which is rolled up in the manner of sheet at least in the first condition.

13. The stent of claim 12, wherein the flat element has a length in a peripheral direction of the stent that corresponds substantially at least to a periphery of the first wall portion in the second condition.

14. A catheter for implanting a stent as set forth in one of claim 1, comprising:

a distal end region; a holding device for holding the stent, arranged near the distal end region; and

a sheathing device, also near the distal end region, which is movable relative to the holding device in a longitudinal direction of the catheter for receiving the stent when moving it to an implantation location, characterized in that at least one application device is provided at the sheathing device for applying a medium which is capable of flow to a surface of the stent.

15. The catheter of claim 14, wherein the application device further comprises at least one application opening in the sheathing device (25), which opening is connected to a feed passage for the medium which is capable of flow.

16. A catheter for implanting a stent as set forth in one of claim 1 comprising:

a distal end region;

a holding device for holding the stent, arranged near the distal end region; and a sheathing device, also near the distal end region, which is movable relative to the holding device in a longitudinal direction of the catheter for receiving the stent when moving it to an implantation location, characterized in that the sheathing device received the stent which has a layer of adhesive coated on its surface towards the sheathing device, which has an anti-adhesion coating on its surface toward the coated stent surface

17. The catheter of claim 14, wherein the holding device further comprises includes a balloon (24) for expansion of the stent into a second condition in which it holds a vessel in a human or animal body in an expanded state.

18. The catheter of claim 17, further comprising:  
a stent as set forth in claim 1.

19. A process for producing a stent, in particular a coronary stent, comprising a tubular body for expansion from a first condition into a second condition in which it holds a vessel in the human or animal body in the expanded state, characterized in that at least a first wall portion of the tubular body is produced from human or animal tissue cells.

20. The process of claim 19, wherein the tissue cells are cultivated in a shaping mold corresponding to the configuration of the first wall portion or on a corresponding carrier to produce the first wall portion.

21. (new) The stent of claim 2, wherein the first wall portion comprises cartilage tissue.

22. (new) The stent of claim 2, wherein the first wall portion comprises a tissue which is genetically modified to increase compatibility and/or stiffness.

23. (new) The stent of claim 3, wherein the first wall portion comprises a tissue which is genetically modified to increase compatibility and/or stiffness.

24. (new) The stent of claim 21, wherein the first wall portion comprises a tissue which is genetically modified to increase compatibility and/or stiffness.

25. (new) The stent of claim 2, wherein the first wall portion comprises a hardenable tissue.

26. (new) The stent of claim 23, wherein the first wall portion comprises a hardenable tissue.

27. (new) The stent of claim 4, wherein the first wall portion comprises a hardenable tissue.

28. (new) The stent of claim 24, wherein the first wall portion comprises a hardenable tissue.

29. (new) The stent of claim 22, wherein the first wall portion comprises a hardenable tissue.

30. (new) The stent of claim 25, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a portion-wise manner contains at least a first component of a hardening agent.

31. (new) The stent of claim 26, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a portion-wise manner contains at least a first component of a hardening agent.

32. (new) The stent of claim 27, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a portion-wise manner contains at least a first component of a hardening agent.

33. (new) The stent of claim 28, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a portion-wise manner contains at least a first component of a hardening agent.

34. (new) The stent of claim 29, wherein the first wall portion is provided in at least a portion wise manner with at least a first layer which includes at least a first component of a hardening agent or at least in a

portion-wise manner contains at least a first component of a hardening agent.

35. (new) The stent of claim 6, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

36. (new) The stent of claim 30, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

37. (new) The stent of claim 31, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

38. (new) The stent of claim 32, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall

portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

39. (new) The stent of claim 33, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

40. (new) The stent of claim 34, further comprising:

a second wall portion arranged in the first wall portion at least in the second condition of the stent, wherein the first layer is arranged on the surface which is towards the second wall portion and the second wall portion, on its surface towards the first wall portion, is provided at least in a portion-wise manner with at least a second layer which includes at least a second component of the hardening agent.

41. (new) The stent of claim 6, wherein at least the first component of the hardening agent is enclosed in microcapsules which burst open under the effect of pressure.

42. (new) The stent of claim 7, wherein at least the first component of the hardening agent is enclosed in microcapsules which burst open under the effect of pressure.

43. (new) The stent of claim 39, wherein at least the first component of the hardening agent is enclosed in microcapsules which burst open under the effect of pressure.

44. (new) The stent of claim 43, wherein the first wall portion is provided at least in a portion-wise manner with at least a third layer which includes at least a first component of an adhesive or contains at least in a portion-wise manner at least a first component of an adhesive, to produce an adhesive join to an element adjoining the first wall portion in the second condition.

45. (new) The stent of claim 9, wherein a second wall portion is provided which is arranged in the first wall portion at least in the second condition of the stent, wherein the third layer is arranged on the surface towards the second wall portion and the second wall portion is provided on its surface towards the first wall portion, at least in a portion-wise manner, with at least a fourth layer which includes at least a second component of the adhesive.

46. (new) The stent of claim 10, wherein at least the first component of the adhesive is enclosed in microcapsules which burst open under the effect of pressure.

47. (new) The stent of claim 44, wherein at least the first component of the adhesive is enclosed in microcapsules which burst open under the effect of pressure.

48. (new) The stent of claim 45, wherein at least the first component of the adhesive is enclosed in microcapsules which burst open under the effect of pressure.

49. (new) The stent of claim 48, wherein the first wall portion is formed by a flat element which is rolled up in the manner of sheet at least in the first condition.



50. (new) The stent of claim 49, wherein the flat element has a length in a peripheral direction of the stent that corresponds substantially at least to a periphery of the first wall portion in the second condition.

51. (new) The catheter of claim 16, wherein the holding device further comprises a balloon for expansion of the stent into a second condition in which it holds a vessel in a human or animal body in an expanded state.

52. (new) The catheter of claim 15, wherein the holding device further comprises a balloon for expansion of the stent into a second condition in which it holds a vessel in a human or animal body in an expanded state.